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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/610,012	07/03/2000	Tien-Jen Lin	H000029	3669

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EXAMINER
NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
2674	

DATE MAILED: 03/29/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/610,012	LIN, TIEN-JEN	
	Examiner	Art Unit	
	Jennifer T Nguyen	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 July 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a) because they fail to show on-board circuit 165 (page 9, line 31-32) as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

2. Claims 1-11 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-8 of copending Application No. 09/609,651 (Lin et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because the only differences between claims in the two applications are scanning interface and connector. In claims of instant application No. 09/610012 discloses first and second scanning interfaces. In claims of copending application No. 09/609,651 discloses a scanning interface. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to make separately one scanning interface become first and second scanning interfaces.

In claims of instant application No. 09/610012 discloses a connector (126). In claims of copending application No. 09/609,651 discloses first and second connector (CN1) and (CN2). It would have been obvious to a person having ordinary skill in the art at the time the invention was

made to make integrally first connector (CN1) and second connector (CN2) become a connector (126) to reduce the cost of the whole system.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Matsumoto et al. (U.S. Patent No. 5,365,284).

Regarding claim 1, Matsumoto teaches a liquid crystal display module, comprising: a liquid crystal display panel (1) having a plurality of scanning lines (80) parallel to a first side (30) of the liquid crystal display panel (1); a driving circuit unit (120) for generating a first scanning control signal and a second scanning control signal; a first scanning unit (50) coupled to the driving circuit unit and a second side of the liquid crystal display panel (1) adjacent to the first side (30) of the liquid crystal display panel (1), for receiving the first scanning control signal and sequentially driving each of the scanning lines in the liquid crystal display panel (1); and a second scanning unit (60), coupled to the driving circuit unit and a third side of the liquid crystal display panel (1) opposite to the second side of the liquid crystal display panel (1), for receiving the second scanning control signal and sequentially driving each of the scanning lines in the liquid crystal display panel (1); wherein the first scanning unit (50) and the second scanning unit

(60) drive one of the scanning lines simultaneously (figure 6A and 6B, from col. 15, line 59 to col. 16, line 10).

Regarding claim 2, Matsumoto teaches the liquid crystal display module wherein the first scanning unit (50) comprises: a first scanning circuit board (i.e., shift register, not shown), coupled to the driving circuit unit, for receiving the first scanning control signal; and a plurality of first scan drivers, coupled between the first scanning circuit board and the second side of the liquid crystal display panel, for sequentially scanning the scanning lines according to the first scanning control signal; and the second scanning unit (60) comprises: a second scanning circuit board (i.e., shift register, not shown), coupled to the driving circuit unit, for receiving the second scanning control signal; and a plurality of second scan drivers coupled to the second scanning circuit board and the third side of the liquid crystal display panel, for sequentially scanning the scanning lines according to the second scanning control signal (figure 6A, from col. 15, line 66 to col. 16, line 7).

Regarding claim 3, Matsumoto teaches the liquid crystal display module wherein the first scanning circuit board is the same as the second scanning circuit board (from col. 15, line 68 to col. 16, line 2).

Regarding claim 4, Matsumoto teaches the liquid crystal display module as wherein the first scanning circuit board is connected to the first scan drivers (NF/2) with a first side (left side of the liquid crystal display panel 1), and the second scanning circuit board is connected to the scan drivers (NF/2) with a second side (right side of the liquid crystal display panel 1) opposite to the first side (figure 6A).

Regarding claim 5, Matsumoto teaches the liquid crystal display module wherein the scanning of the first scan drivers and the scanning of the second scan drivers are in reverse order.

Regarding claim 6, Matsumoto teaches the liquid crystal display module wherein the first scan drives (NF/2 at the left side of the liquid crystal display panel 1) and the second scan drivers (NF/2 at the right side of the liquid crystal display panel 1) are integrated circuit in tape carrier packages (figure 6A).

Regarding claims 7 and 8, Matsumoto teaches the liquid crystal display module wherein the first data shifting direction signal (80 at the left side of the liquid crystal display panel 1) of the first scanning control signal and the second data-shifting direction signal (80 at the right side of the liquid crystal display panel1) of the second scanning control signal represent the reverse shifting directions (figure 6A and 6B, col. 15. line 64-68).

Regarding claim 9, Matsumoto teaches a scanning circuit board, located in a liquid crystal display module with a liquid crystal display panel (1) for connecting with a plurality of scanning drivers (NF/2) to scan a plurality of scanning lines (80) extending from a first side of the liquid crystal display panel (1) to a second side of the liquid crystal display panel (1), comprising: a connector for connecting with an external connector and receiving a scanning control signal; a first scanning interface, located at a first side of the scanning circuit board, for transferring the scanning control signal to the scan drivers (NF/2) connected with the first scanning interface and driving each of the scanning lines (80) from the first side of the liquid crystal display panel (1); and a second scanning interface located at a second side of the scanning circuit board opposite to the first side of the scanning circuit board, for transferring the scanning control signal to the scan drivers (NF/2) connected with the second scanning interface and

driving each of the scanning lines (80) from the second side of the liquid crystal display panel (1) (figure 6A, 6B).

Regarding claims 10 and 11, Matsumoto teaches the scanning circuit board wherein the data shifting direction signal sent to the first scanning interface and the second scanning interface represent reverse shifting directions (col. 15, lines 64-68).

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cairns et al. (U.S. Patent No. 6,266,041) teaches active matrix drive circuit.

Zavaracky et al. (U.S. Patent No. 6,121,950) teaches control system for display panels.

Kihara et al. (U.S. Patent No. 5,781,171) teaches shift register, driving circuit and drive unit for display device.

Duwaer (U. S. Patent No. 4,922,240) teaches thin film active matrix and addressing circuitry therefore.

Masumori et al. (U. S. Patent No. 5,168,270) teaches liquid crystal display device and driving method.

Higashi (U.S. Patent No. 6,023,260) teaches liquid crystal display device, driving method for liquid crystal display device

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225.** The examiner can normally be reached on Mon-Fri from 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reach at **703-305-4709**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, DC. 20231

Or faxed to: 703-872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is 703-306-0377.

Jennifer T. Nguyen
Patent Examiner
Art Unit 2674

RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600